

10/541998

PATENT COOPERATION TREATY

the INTERNATIONAL SEARCHING AUTHORITY

s Collison Cave
15
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BOURNE VIC 3000

PCT

NOTIFICATION OF TRANSMITTAL OF
THE INTERNATIONAL SEARCH REPORT AND
THE WRITTEN OPINION OF THE INTERNATIONAL
SEARCHING AUTHORITY, OR THE DECLARATION

(PCT Rule 44.1)

Resp due 24/3/04
ant's or agent's file reference

6690 EH

ational application No.

/AU2004/000043

Date of mailing 24 MAR 2004
(day/month/year) EJA

FOR FURTHER ACTION See paragraphs 1 and 4 below

International filing date

(day/month/year 13 January 2004)

cant

AUTOGEN RESEARCH PTY LTD et al



The applicant is hereby notified that the international search report and the written opinion of the International Searching Authority have been established and are transmitted herewith.

Filing of amendments and statement under Article 19:
The applicant is entitled, if he so wishes, to amend the claims of the international application (see Rule 46):

When? The time limit for filing such amendments is normally two months from the date of transmittal of the international search report.

Where? Directly to the International Bureau of WIPO, 34 chemin des Colombettes
1211 Geneva 20, Switzerland, Facsimile No.: +41 22 740 14 35

For more detailed instructions, see the notes on the accompanying sheet.

☐ The applicant is hereby notified that no international search report will be established and that the declaration under Article 17(2)(a) to that effect and the written opinion of the International Searching Authority are transmitted herewith.

☐ With regard to the protest against payment of (an) additional fee(s) under Rule 40.2, the applicant is notified that:

☐ the protest together with the decision thereon has been transmitted to the International Bureau together with the applicant's request to forward the texts of both the protest and the decision thereon to the designated Offices.

☐ no decision has been made yet on the protest; the applicant will be notified as soon as a decision is made.

Reminders

Shortly after the expiration of 18 months from the priority date, the international application will be published by the International Bureau. If the applicant wishes to avoid or postpone publication, a notice of withdrawal of the international application, or of the priority claim, must reach the International Bureau as provided in Rules 90bis.1 and 90bis.3, respectively, before the completion of the technical preparations for international publication.

The applicant may submit comments on an informal basis on the written opinion of the International Searching Authority to the International Bureau. The International Bureau will send a copy of such comments to all designated Offices unless an international preliminary examination report has been or is to be established. These comments would also be made available to the public but not before the expiration of 30 months from the priority date.

Within 19 months from the priority date, but only in respect of some designated Offices, a demand for international preliminary examination must be filed if the applicant wishes to postpone the entry into the national phase until 30 months from the priority date (in some Offices even later); otherwise, the applicant must, within 20 months from the priority date, perform the prescribed acts for entry into the national phase before those designated Offices.

In respect of other designated Offices, the time limit of 30 months (or later) will apply even if no demand is filed within 19 months.

See the Annex to Form PCT/IB/301 and, for details about the applicable time limits, Office by Office, see the PCT Applicant's Guide, Volume II, National Chapters and the WIPO Internet site.

Name and mailing address of the ISA/AU

AUSTRALIAN PATENT OFFICE
PO BOX 200, WODEN ACT 2606, AUSTRALIA
E-mail address: pct@ipaustalia.gov.au

Authorized officer

DAVID GRIFFITHS

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PATENT COOPERATION TREATY
PCT

INTERNATIONAL SEARCH REPORT

(PCT Article 18 and Rules 43 and 44)

Applicant's or agent's file reference 396690 EH	FOR FURTHER ACTION <small>see Form PCT/ISA/220 as well as, where applicable, item 5 below.</small>	
International application No. PT/AU2004/000043	International filing date (<i>day/month/year</i>) 13 January 2004	(Earliest) Priority Date (<i>day/month/year</i>) 13 January 2003
Applicant AUTOGEN RESEARCH PTY LTD et al		

This international search report has been prepared by this International Searching Authority and is transmitted to the applicant according to Article 18. A copy is being transmitted to the International Bureau.

This international search report consists of a total of **7** sheets.

☐ It is also accompanied by a copy of each prior art document cited in this report.

Basis of the report

1. With regard to the language, the international search was carried out on the basis of the international application in the language in which it was filed, unless otherwise indicated under this item.

☐ The international search was carried out on the basis of a translation of the international application furnished to this Authority (Rule 23.1(b)).

2. ☒ With regard to any nucleotide and/or amino acid sequence disclosed in the international application, see Box No. I.

☒ Certain claims were found unsearchable (See Box No. II).

☒ Unity of invention is lacking (See Box No. III).

With regard to the title,

☐ the text is approved as submitted by the applicant.

☒ the text has been established by this Authority to read as follows:

OBESITY-RELATED GENES

With regard to the abstract,

☒ the text is approved as submitted by the applicant.

☐ the text has been established, according to Rule 38.2(b), by this Authority as it appears in Box No. IV. The applicant may, within one month from the date of mailing of this international search report, submit comments to this Authority.

With regard to the drawings,

1. the figure of the drawings to be published with the abstract is Figure No.

☐ as suggested by the applicant.

☐ as selected by this Authority, because the applicant failed to suggest a figure.

☐ as selected by this Authority, because this figure better characterizes the invention.

2. ☒ none of the figures is to be published with the abstract.

INTERNATIONAL SEARCH REPORT

International application No.

PCT/AU2004/000043

I Nucleotide and/or amino acid sequence(s) (Continuation of item 1.b of the first sheet)

In regard to any nucleotide and/or amino acid sequence disclosed in the international application and necessary to the invention, the international search was carried out on the basis of:

type of material

☒ a sequence listing

☐ table(s) related to the sequence listing

format of material

☐ in written format

☒ in computer readable form

time of filing/furnishing

☐ contained in the international application as filed

☒ filed together with the international application in computer readable form

☐ furnished subsequently to this Authority for the purposes of search

☐ In addition, in the case that more than one version or copy of a sequence listing and/or table(s) relating thereto has been filed or furnished, the required statements that the information in the subsequent or additional copies is identical to that in the application as filed or does not go beyond the application as filed, as appropriate, were furnished.

Additional comments:

INTERNATIONAL SEARCH REPORT

International application No.
PCT/AU2004/000043

II Observations where certain claims were found unsearchable (Continuation of item 2 of first sheet)

International search report has not been established in respect of certain claims under Article 17(2)(a) for the following reasons:

☐ Claims Nos.:
because they relate to subject matter not required to be searched by this Authority, namely:

☒ Claims Nos.: 1, 22, 23-28 and 30 (all in part)
because they relate to parts of the international application that do not comply with the prescribed requirements to such an extent that no meaningful international search can be carried out, specifically:
The scope of "a derivative or homolog" in claim 1 and "a derivative, homolog, analog, chemical equivalent or mimetic" in claim 28 is so unclear that a meaningful search is not possible and these claims have only been searched to the extent that they do not include any of these terms.

Continued on supplemental sheet...

☐ Claims Nos.:
because they are dependent claims and are not drafted in accordance with the second and third sentences of Rule 6.4(a)

III Observations where unity of invention is lacking (Continuation of item 3 of first sheet)

This International Searching Authority found multiple inventions in this international application, as follows:

The only feature in common between the claimed sequences is that they are differentially expressed in hypothalamus in obese animals compared to lean animals or in fasted animals compared to fed animals or in diabetic animals compared to non-diabetic animals. However, the feature "differential expression in hypothalamus, in fasted animals compared to fed animals" is not novel since there are other genes known with this feature. Thus, no unity of invention is in evidence *a posteriori*.

1. ☐ As all required additional search fees were timely paid by the applicant, this international search report covers all searchable claims.
2. ☒ As all searchable claims could be searched without effort justifying an additional fee, this Authority did not invite payment of any additional fee.
3. ☐ As only some of the required additional search fees were timely paid by the applicant, this international search report covers only those claims for which fees were paid, specifically claims Nos.:
4. ☐ No required additional search fees were timely paid by the applicant. Consequently, this international search report is restricted to the invention first mentioned in the claims; it is covered by claims Nos.:

Remark on Protest

- ☐ The additional search fees were accompanied by the applicant's protest.
- ☐ No protest accompanied the payment of additional search fees.

INTERNATIONAL SEARCH REPORT

International application No.

PCT/AU2004/000043

CLASSIFICATION OF SUBJECT MATTER

Cl. 7: C07K 14/47, C07K 14/475, A61K 38/18, A61K 48/00, A61P 3/04, A61P 3/06, A61P 5/04, C07H 21/02, C07H 21/04

ording to International Patent Classification (IPC) or to both national classification and IPC

FIELDS SEARCHED

imum documentation searched (classification system followed by classification symbols)

umentation searched other than minimum documentation to the extent that such documents are included in the fields searched

tronic data base consulted during the international search (name of data base and, where practicable, search terms used)

GIS: SEQ. ID. Nos. 1-9; DGENE SEQ. ID. Nos. 1-9 (Note, any sequences in the answer sets that were not
erentially expressed in obese animals or in fasted animals were not considered as possible citations)

Med and Espac: keywords: hypothalamus, gastrocnemius, expression, psammomys, obesity, diabetes

DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
P,X	WO 2003/033513, A1 (AUTOGEN RESEARCH PTY LTD <i>et al.</i>) 24 April 2003 See whole document	1 - 31
P,X	WO 2003/018823, A1 (AUTOGEN RESEARCH PTY LTD <i>et al.</i>) 6 March 2003 See whole document	1 - 31
P,X	WO 2003/016542, A1 (AUTOGEN RESEARCH PTY LTD <i>et al.</i>) 27 February 2003 See whole document	1 - 31
X	WO 2002/062994, A1 (AUTOGEN RESEARCH PTY LTD <i>et al.</i>) 15 August 2002 See whole document	1 - 31

☒ Further documents are listed in the continuation of Box C☒ See patent family annex

Special categories of cited documents:

document defining the general state of the art which is
not considered to be of particular relevance"T" later document published after the international filing date or priority date and not in
conflict with the application but cited to understand the principle or theory
underlying the inventionearlier application or patent but published on or after the
international filing date"X" document of particular relevance; the claimed invention cannot be considered novel
or cannot be considered to involve an inventive step when the document is taken
alonedocument which may throw doubts on priority claim(s)
or which is cited to establish the publication date of
another citation or other special reason (as specified)
document referring to an oral disclosure, use, exhibition
or other means"Y" document of particular relevance; the claimed invention cannot be considered to
involve an inventive step when the document is combined with one or more other
such documents, such combination being obvious to a person skilled in the artdocument published prior to the international filing date
but later than the priority date claimed

"&" document member of the same patent family

Date of the actual completion of the international search

February 2004

Date of mailing of the international search report

24 MAR 2004

Name and mailing address of the ISA/AU

AUSTRALIAN PATENT OFFICE
BOX 200, WODEN ACT 2606, AUSTRALIA
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simile No. (02) 6285 3929

Authorized officer

DAVID GRIFFITHS

Telephone No. (02) 6283 2628

INTERNATIONAL SEARCH REPORT

International application No.

PCT/AU2004/000043

Continuation).

DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	WO 2001/002560, A1 (AUTOGEN RESEARCH PTY LTD <i>et al.</i>) 11 January 2001 See whole document	1 - 31
X	WO 2000/064931, A1 (AUTOGEN RESEARCH PTY LTD <i>et al.</i>) 2 November 2000 See whole document	1 - 31
X	WO 2002/008275, A2 (BAYER CORPORATION) 31 January 2002 See whole document	1 - 31
X	WO 1999/023217, A1 (INTERNATIONAL DIABETES INSTITUTE) 14 May 1999 See whole document	1 - 31

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INTERNATIONAL SEARCH REPORT

International application No.

PCT/AU2004/000043

Additional Box

(used when the space in any of Boxes I to VIII is not sufficient)

Continuation of Box No: II

Claims 23-28 and 30 are directed to agents or molecules that modulate the effect of the described genes or to the use of such agents. Terms such as 'agents' in their broadest scope do not restrict the compounds claimed to any particular class of chemicals and so claims to agents, modulators or their use are not fully supported by the description. The claims have only been searched to the extent that the agents are antibodies or similar molecules whose structures can be directly deduced from the present disclosure because they can not be feasibly or economically searched across their entire scopes.

Information on patent family members

PCT/AU2004/000043

**Patent Document Cited in
Search Report**

/O	2003/033513		NONE				
/O	2003/018823		NONE				
/O	2003/016542		NONE				
/O	2002/062994	CA	2437423	EP	1366164		
/O	2001/00786	AU	54234/00	EP	1206566		
/O	2000/064931	AU	39469/00	CA	2370286	EP	1196438
/O	2002/008275	AU	79038/01	US	2002041870		
/O	1999/023217	AU	10112/99	CA	2307839	EP	1030915
		NZ	504327	US	6436670		

END OF ANNEX

PATENT COOPERATION TREATY

20 JUL 2004

PCT

the
INTERNATIONAL PRELIMINARY EXAMINING AUTHORITY

Agent :

Davies Collison Cave
Level 15
1 Nicholson Street
MELBOURNE VIC 3000

NOTIFICATION OF RECEIPT
OF DEMAND BY COMPETENT INTERNATIONAL
PRELIMINARY EXAMINING AUTHORITY

(PCT Rule 59.3(e) and 61.1(b), first sentence
and Administrative Instructions, Section 601(a))

Date of mailing 20 JUL 2004
(day/month/year) (20/7/2004)

Applicant's or agent's file reference
12396690 EH

IMPORTANT NOTIFICATION

International application No.
PCT/AU2004/000043

International filing date (day/month/year)
13 JAN 2004 (13/1/2004)

Priority date (day/month/year)
13 JAN 2003 (13/1/2003)

Applicant

Autogen Research Pty Ltd (et al.)

1. The applicant is hereby **notified** that this International Preliminary Examining Authority considers the following date as the date of receipt of the demand for international preliminary examination of the international application:

15 JUL 2004 (15/7/2004)

2. That date of receipt is:



the actual date of receipt of the demand by this Authority (Rule 61.1(b)).



the actual date of receipt of the demand on behalf of this Authority (Rule 59.3(e)).



the date on which this Authority has, in response to the Invitation to correct defects in the demand (Form PCT/IPEA/404), received the required corrections.

- 3.



Attention: That date of receipt is **after** the expiration of 19 months from the priority date. Consequently, in respect of some Offices, the demand does not have the effect of postponing the entry into the national phase until 30 months from the priority date (or later in some Offices) (Article 39(1)) and the acts for entry into the national phase must therefore be performed within 20 months from the priority date (or later in some Offices). **However**, in respect of some other Offices, the time limit of 30 months (or later) may nevertheless apply. See the Annex to Form PCT/LB/301 and, for details about the applicable time limits, Office by Office, see the *PCT Applicant's Guide*, Volume II, National Chapters and the WIPO Internet site.



(If applicable) This notification confirms the information given by telephone, facsimile transmission or in person on:

4. Only where paragraph 3 applies, a copy of this notification has been sent to the International Bureau.

Authorized officer

PATENT COOPERATION TREATY

from the:
INTERNATIONAL PRELIMINARY EXAMINING AUTHORITY

Avies Collison Cave
Level 15
Nicholson Street
ELBOURNE VIC 3000

PCT NOTIFICATION OF TRANSMITTAL OF INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY (Chapter II of the Patent Cooperation Treaty)

(PCT Rule 71.1)

Date of mailing
(day/month/year) 9 DEC 2004

Applicant's or agent's file reference
396690/EJH

IMPORTANT NOTIFICATION

International application No.
PCT/AU2004/000043

International filing date (day/month/year)
13 January 2004

Priority date (day/month/year)
13 January 2003

Applicant

AUTOGEN RESEARCH PTY LTD et al

The applicant is hereby notified that this International Preliminary Examining Authority transmits herewith the international preliminary report on patentability and its annexes, if any, established on the international application.

A copy of the report and its annexes, if any, is being transmitted to the International Bureau for communication to all the elected Offices.

Where required by any of the elected Offices, the International Bureau will prepare an English translation of the report (but not of any annexes) and will transmit such translations to those Offices.

REMINDER

The applicant must enter the national phase before each elected Office by performing certain acts (filing translations and paying national fees) within 30 months from the priority date (or later in some Offices) (Article 39(1)) (see also the reminder sent by the International Bureau with Form PCT/IB/301).

Where a translation of the international application must be furnished to an elected Office, that translation must contain a translation of any annexes to the international preliminary report on patentability. It is the applicant's responsibility to prepare and furnish such translation directly to each elected Office concerned.

For further details on the applicable time limits and requirements of the elected Offices, see Volume II of the *PCT Applicant's Guide*.

The applicant's attention is drawn to Article 33(5), which provides that the criteria of novelty, inventive step and industrial applicability described in Article 33(2) to (4) merely serve the purposes of international preliminary examination and that "any Contracting State may apply additional or different criteria for the purposes of deciding whether, in that State, the claimed invention is patentable or not" (see also Article 27(5)). Such additional criteria may relate, for example, to exemptions from patentability, requirements for enabling disclosure, clarity and support for the claims.

Address and mailing address of the IPEA/AU

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